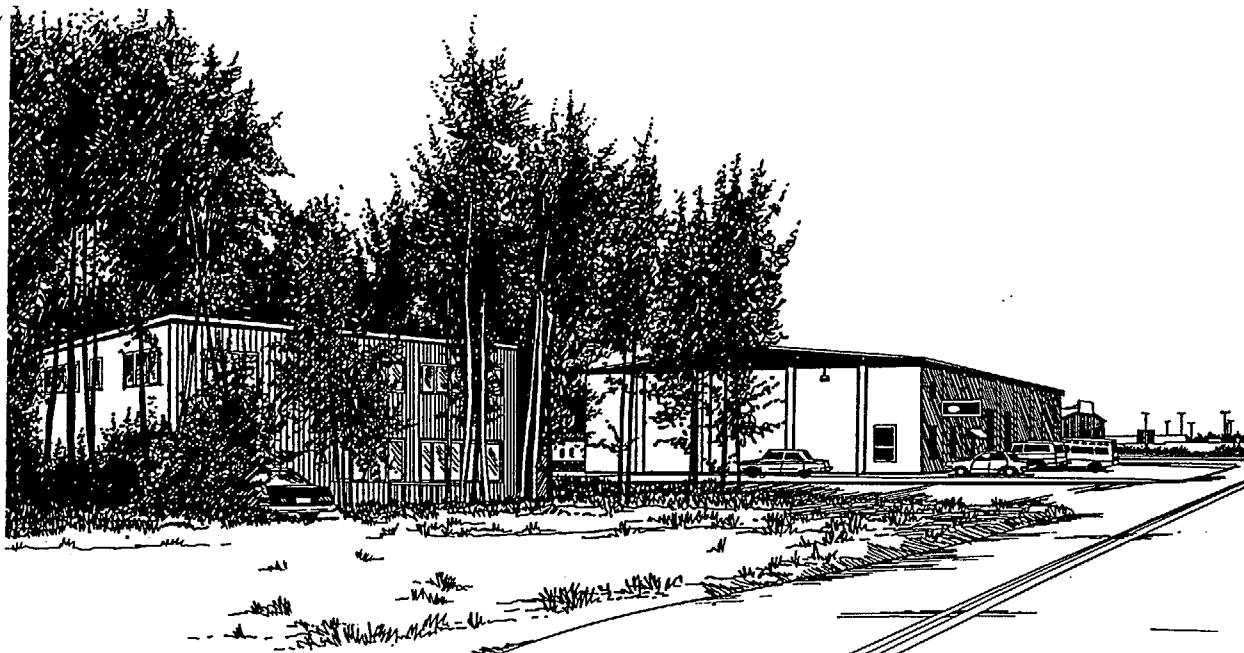


Chapter Six
ENVIRONMENTAL EVALUATION



Chapter Six

ENVIRONMENTAL EVALUATION

Flagstaff Pulliam Airport

INTRODUCTION

Analysis of the potential environmental impacts of proposed airport development projects is an important component of the Airport Master Plan process. The primary purpose of this chapter is to evaluate the proposed development program for the new Flagstaff Pulliam Airport to determine whether proposed development actions individually or collectively would significantly affect the quality of the environment. A major component of this evaluation is to coordinate with appropriate federal, state and local agencies to identify potential environmental concerns that should be considered prior to the design and construction of the new airport. Agency coordination consisted of a letter requesting comments and/or information regarding the proposed airport development. Issues of concern that were identified as part of this

process, are presented in the following discussion. Letters received from various agencies are included in **Appendix A**.

The proposed construction at the Flagstaff Pulliam Airport will require compliance with the National Environmental Policy Act of 1969 (NEPA). Compliance with NEPA is generally satisfied by the preparation of an Environmental Assessment (EA) or Environmental Impact Statement (EIS). While this section of the master plan is not intended to satisfy NEPA requirements, it is intended to supply a preliminary review of environmental considerations that would be analyzed in more detail within the NEPA process. This environmental analysis includes a preliminary examination of each of the environmental impact categories outlined in FAA Order 5050.4A, Airport Environmental Handbook.

PROPOSED DEVELOPMENT

As a result of the Master Plan analysis, a number of airport improvements have been recommended for implementation over the next 20 years. Drawings No. 1 and No. 2 (Chapter 7) illustrates the development proposed during this period. A list of the major projects planned for completion follows:

- Acquire land for the Runway 21 extension and precision instrument runway protection zone (RPZ).
- Construct a 1,300 foot extension to Runway 21.
- Construct a 1,525 foot extension to the parallel taxiway for Runway 3-21.
- Relocate weather instruments.
- Widen West taxiway to dual lanes and extend into the Westplex Area.
- Construct auto parking.
- Install Instrument Landing System and approach lighting system.
- Construct Shade or T-Hangars.
- Construct new Terminal Building.
- Construct FBO Building/Hangar.
- Provide a water storage capacity.
- Construct wastewater system.
- Provide natural gas to the airport.
- Expand apron in the Westplex Area.
- Install additional fuel storage facilities.
- Install lighted wind cone on Runway 3.
- Install Runway End Identifier Lights, (REIL) Runway 3.
- Install Runway Visual Range Indicator, (RVR) Runway 21.

ENVIRONMENTAL CONSEQUENCES - SPECIFIC IMPACTS

The purpose of this section is to briefly examine potential impact areas as they relate to the proposed airport development actions.

The following subsections address each of the specific impact categories outlined by FAA Order 5050.4A.

NOISE

In Chapter Five, potential impacts related to noise were examined through the development of noise exposure patterns, or contours. These contours were developed based on the type and quantity of current operations (1989) and forecasted for the year 2010. The noise contours generated were overlaid on Flagstaff Pulliam Airport. Exhibit 6A depicts the noise contours as they exist today and Exhibit 6B illustrates the predicted noise contour pattern for the year 2010.

The operations and aircraft data used to produce the noise contours on Exhibit 6A and 6B were derived from the data in Chapter 3. For the year 2010, the total area included within the 60+ Ldn noise contour area will be approximately 762 acres. Approximately 279 of these acres are contained within the 65+ Ldn contour, and 131 of these acres are included within the 70+ Ldn noise contour. The 65 Ldn noise contour, the noise level generally recognized as incompatible with residential development, remains entirely on airport property during the planning period.

Since the last master plan, the FAA has updated the Integrated Noise Model (INM) which is used to predict noise contours for airports. The most recent version of the INM, Version 3.9, has the latest information on aircraft engine specifications and aircraft types. Some of the older jet aircraft with older less efficient and noisier engines have been either retrofitted with new engines or will be prohibited from operating at United States airports in the future. These factors required adjustment in the aircraft types used in the analysis. The operational

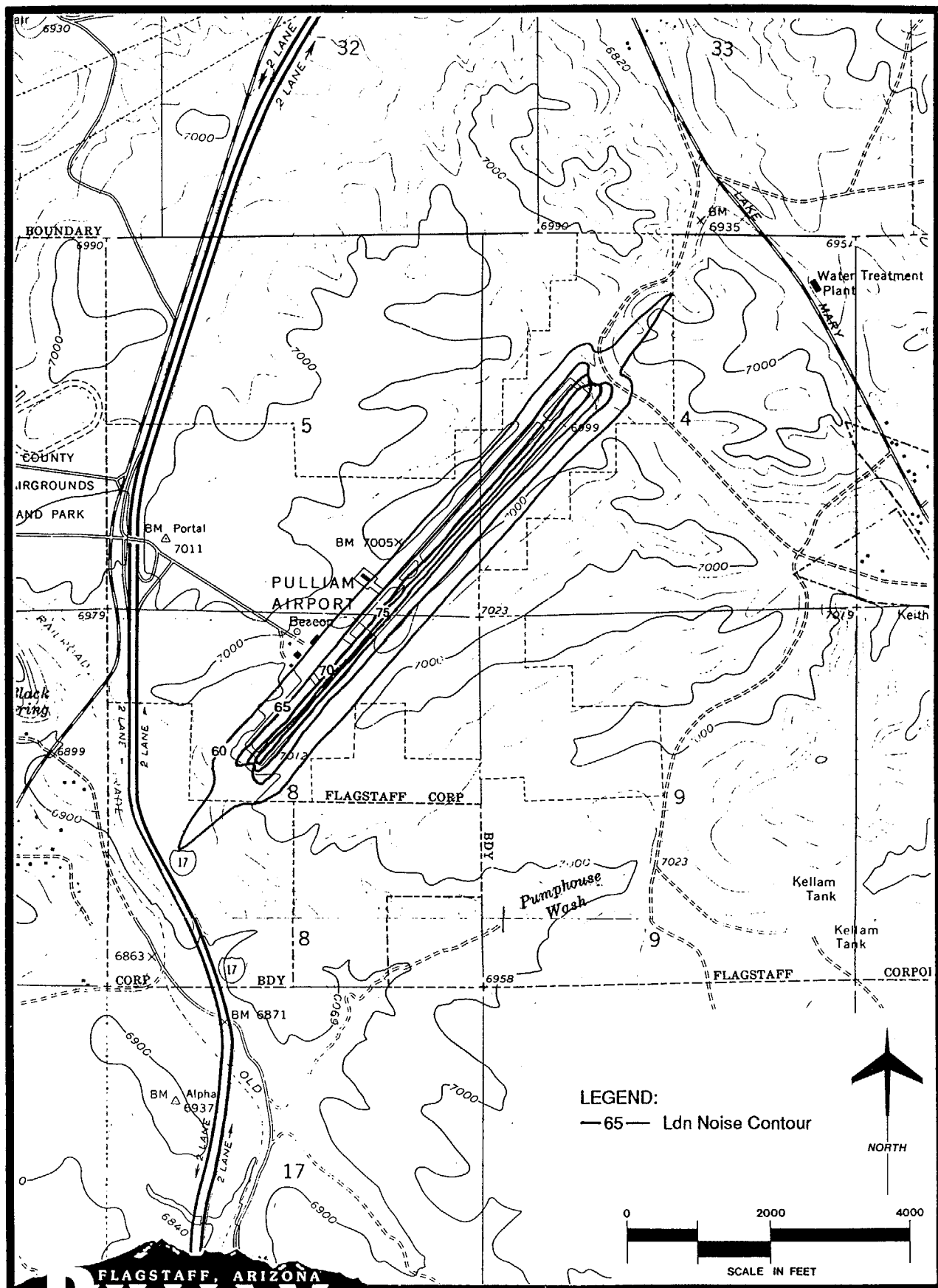
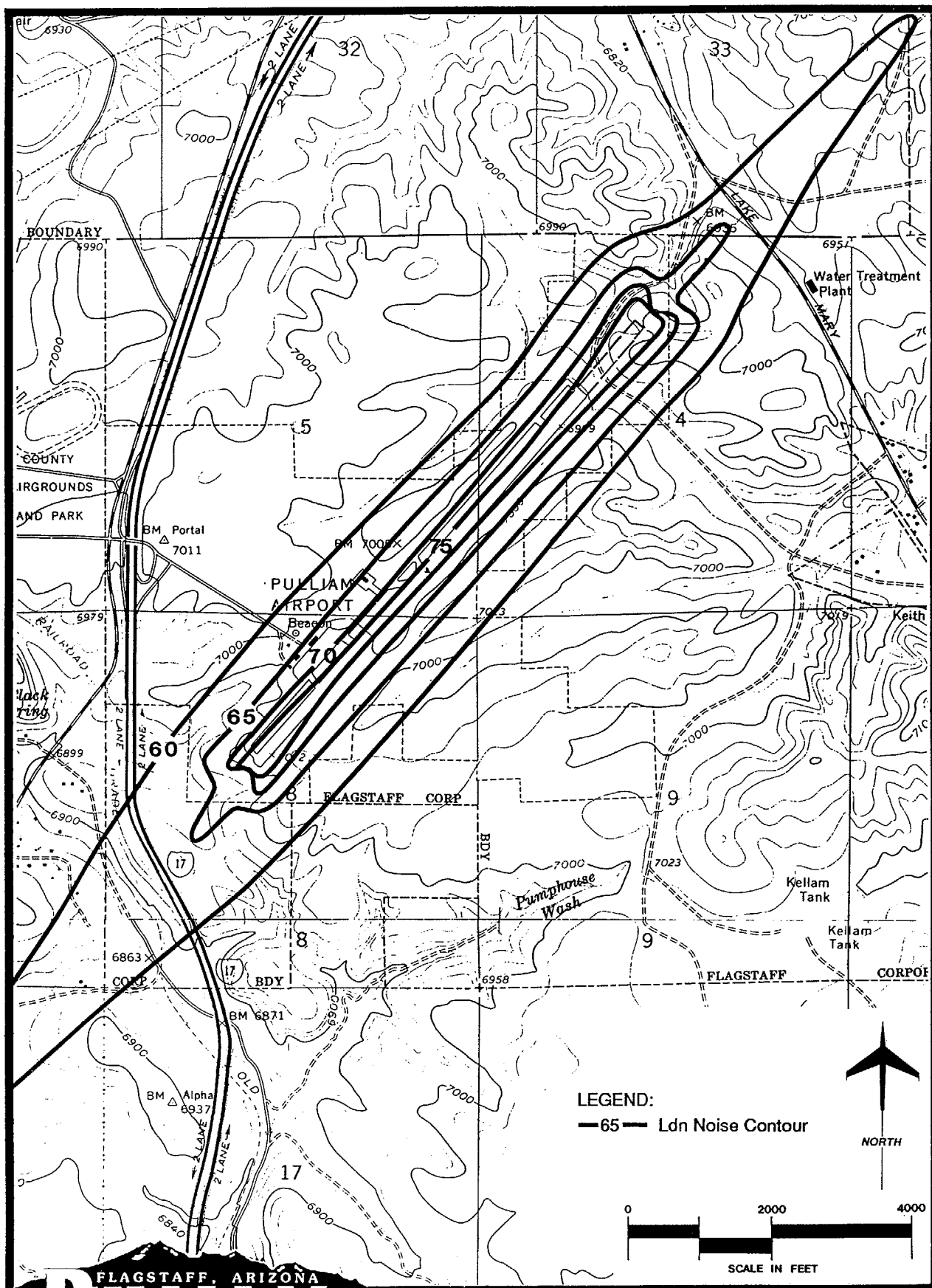


Exhibit 6A
 EXISTING NOISE CONTOURS - 1989



FLAGSTAFF, ARIZONA
PULLIAM
AIRPORT

Exhibit 6B
FUTURE NOISE CONTOURS - 2010

levels and aircraft mix forecast in Chapter 3 were used in the data base which produced the contours in Exhibits 6A and 6B.

COMPATIBLE LAND USE

Flagstaff Pulliam Airport is located within the jurisdiction of Coconino County. It is approximately five miles south of Interstate 40 and the center of the City of Flagstaff, approximately one half mile east of Interstate 17, within the corporate city limits.

Noise contours can be used as a tool to determine potential incompatible land uses. To identify the land uses potentially impacted, aircraft noise contours are overlaid on current and future land use maps for the airport and vicinity.

Federal Aviation Regulation Part 150, which recommends guidelines for land use compatibility within various levels of noise exposure, indicates that mobile home parks, outdoor music shells and amphitheaters are incompatible with noise above 65 Ldn. Schools and residential uses other than mobile homes also are generally incompatible with noise above Ldn 65, however, the guidelines note that, where local communities determine that these uses are permissible, sound attenuation measures should be used. Several other uses including hospitals, nursing homes, churches, auditoriums, livestock breeding, amusements, parks, resorts, and camps are considered incompatible at levels above 75 Ldn. Experience has shown that new residential development should be prohibited in areas subject to noise exceeding Ldn 65. The existing and future 65 Ldn noise contour does not impact any off-airport property, assuming the land required for the runway extension and RPZ is acquired.

No residences or other habitable structures are located within the 65 Ldn noise exposure

area. The closest noise sensitive land uses are residential units situated southwest of the airport (west of Interstate 17) in a small residential community.

The majority of the land surrounding the airport is undeveloped forest land. A large recreation area, Fort Tuthill County Park, comprising 640 acres, is located west of the airport (west of Interstate 17). Privately held property is located in small parcels west and southwest of the approach end of Runway 3 and to the northwest and west of the approach end of Runway 21.

Three plans affect existing and future land uses within the airport environs: **Growth Management Guide 2000 for the City of Flagstaff, 1987**, the **Coconino County Comprehensive Plan** and the **Coconino National Forest Land Management Plan**.

The current zoning in the airport environs designates the land east and northwest of the airport as Public Lands Forested (Coconino National Forest). Immediately west of the airport, in airport property presently pending release for sale, the area is zoned Light Industrial and Commercial. The remaining areas surrounding the airport are designated as Rural Residential. Except for a small low density residential area to the southwest of the airport and two residential communities approximately a 3/4 of a mile east and 1/2 mile northwest, the airport environs are vacant.

The City of Flagstaff's **Growth Management Guide 2000**, has designated the area within the forecast 60 Ldn noise contour for the year 2005 (as illustrated and described in the previous airport master plan) as an Airport Noise Sensitive Zone. Planning guidelines within this area are to discourage but not prohibit residential land uses.

If the City of Flagstaff retains the current Airport Noise Sensitive Zone and planning guidelines for future land uses within this

area, the future development of the airport is not expected to have a significant impact on the public.

SOCIAL IMPACTS

Social impacts known to result from airport improvement projects are often associated with relocation activities or other community disruption. Implementation of the proposed airport development will not require the relocation of residences or businesses.

The development of the proposed runway extension and other on-airport development projects are not anticipated to alter surface transportation patterns; divide or disrupt established communities; disrupt orderly, planned development; nor create an appreciable change in employment.

INDUCED SOCIOECONOMIC IMPACTS

Significant shifts in patterns of population movement or growth or public service demands are not anticipated as a result of the proposed project. It is expected, however, that the proposed new airport development would potentially induce positive socioeconomic impacts for the community over a period of years. The airport, with expanded facilities and services, will encourage or attract additional users. It is expected to encourage tourism, industry, and trade as well as the future growth and expansion of the community's economic base. Future socioeconomic impacts resulting from the proposed development will be primarily positive in nature.

The growth in commercial operations and enplanements will probably result in an increase in visitation to the National Park System units in the Flagstaff area. Correspondence received from the Department of the Interior, National Park

Service indicates that the increase in visitation to units within the Flagstaff area will not have a negative impact on these units unless scheduled flight paths to the airport are consistently directed over these areas. The existing airspace in the Flagstaff area will allow aircraft to attain the minimum 2,000 feet mean sea level altitude over the National Park System units in the Flagstaff area.

AIR QUALITY

The federal government has set health-based ambient air quality standards for the following six pollutants: carbon monoxide (CO), nitrogen dioxide (NO_x), sulphur dioxide (SO_x), lead, and PM₁₀ (particulate matter of 10 microns or smaller). Non-attainment refers to those areas that, by virtue of their air pollutant emission trends, violate these national standards.

The Arizona Department of Environmental Quality was contacted to determine the potential impacts the proposed development would have on air quality. According to their written response dated October 22, 1990, included within **Appendix A**, the planned project is located in an area that is currently meeting all federal health standards for air pollution levels, and no adverse air quality impact is anticipated as a result of the proposed project. Since the area would be considered to have a medium probability of violating the NAAQS standards for particulates in the future, however, it was recommended that steps be taken during construction and implementation activities to minimize the amount of particulate matter (fugitive dust) generated as a result of the project.

The generation of fugitive dust as a result of construction activities is anticipated due to the movement of heavy construction equipment and the exposure and disturbance of surface soils. This impact is expected to be both temporary and localized. The

following preventive and mitigative measures were recommended and should be utilized during construction. Applicable State regulations are contained in AAC R18-2-404, 405, 406, and 407.

Site Preparation

- Minimize land disturbance.
- Use watering trucks to minimize dust.
- Cover trucks when hauling dirt.
- Stabilize the surface of dirt piles if not removed immediately.
- Use windbreaks to prevent any accidental dust pollution.
- Limit vehicular paths and stabilize these temporary roads.
- Grade to prevent soil from washing onto paved roadways.

Construction

- Cover trucks when transporting materials.
- Use dust suppressants on traveled paths which are not paved.
- Minimize unnecessary vehicular and machinery activities.
- Minimize dirt track-out by washing or cleaning trucks before leaving the construction site.

Post Construction

- Revegetate any disturbed land not used.
- Remove unused material.
- Remove dirt piles.
- Revegetate all vehicular paths created during construction to avoid future off-road vehicular activities.

According to the handbook **Air Quality Procedures for Civilian Airports and Air Force Bases**, Report No. FAA-EE-82-21, if the proposed action is in a state which does not have applicable indirect source review (ISR) requirements, as with the State of Arizona, then projected airport activity levels are examined. According to the handbook,

air quality analysis is not required for the proposed actions since commercial service airports with less than 1.3 million annual enplanements or general aviation operational levels less than 180,000 annually do not generate significant air pollutants.

An air quality certification of this project must be pursued during the environmental process, pursuant to Order 5050.4A, which states that *"The 1982 Airport Act requires that Airport Improvement program applications for projects involving airport location, runway location, or a major runway extension shall not be approved unless the governor of the state in which the project is located certifies that there is 'reasonable assurance' that the project will be located, designed, constructed, and operated in compliance with applicable air and water quality standards"*.

WATER QUALITY

Water quality concerns related to airport expansion most often relate to the following.

- Domestic sewage disposal.
- Increased surface runoff and soil erosion.
- Storage and handling of fuel, petroleum, solvents, etc.

A water quality certificate for this project must be pursued during the formal Environmental Assessment process, pursuant to Order 5050.4A, which states that "The 1982 Airport Act requires that Airport Improvement Program applications for projects involving airport location, runway location, or a major runway extension shall not be approved unless the governor of the state in which the project is located certifies that there is 'reasonable assurance' that the project will be located, designed, constructed and operated in compliance with applicable air and water quality standards.

Initial plans for the proposed Flagstaff Pulliam Airport include the expansion of the existing septic system, since the costs needed

to extend sanitary sewer lines to the site or purchase an on-site treatment facility would be prohibitive. It is anticipated that the quantity of sewage that would be generated by the proposed project activities could easily be handled with a septic system. The design and location of the septic system should take into consideration the presence of designated floodplain areas and existing natural washes or arroyos. The future potential to connect to a sanitary sewer system would be dependent on the level of use and the future proximity of these sanitary facilities.

Implementation of the proposed project will result in an increase in impermeable surfaces and a resultant increase in surface runoff for both landside and airside facilities. The proposed development might have short-term effects on water quality, particularly suspended sediments, during and shortly after precipitation events in the construction phase. Recommendations established in FAA Advisory Circular 150/5370-10 Standards for Specifying Construction of Airports, item P-156, Temporary Air and Water Pollution, Soil Erosion and Siltation Control will be incorporated in project design specifications to further mitigate potential impacts. These standards include temporary measures to control water pollution, soil erosion, and siltation through the use of berms, dikes, dams, sediment basins, slope drains, and other control devices (see section on Construction Impacts). Due to the topography in the area selected, it will be especially important to minimize and control erosion activities.

Spills, leaks and other releases to the environment of hazardous substances are often a concern at airports due to fuel storage, fueling activities and maintenance of aircraft. Storm water flowing over impermeable surfaces may pick up petroleum product residues, and, if not controlled, transport them off site. Perhaps the most crucial concern would be spills or leaks of substances that could filter through the soil and contaminate groundwater resources.

Federal and State laws and regulations have been established to safeguard these facilities and activities. These regulations include standards for underground tank construction materials and the installation of leak or spill detection devices. The airport will be designing an above ground fuel storage facility in order to ultimately transfer the fuel stored in underground tanks to above ground storage facilities. The above ground storage tanks will be constructed and designed to meet the current EPA and State standards. Ultimately, the underground storage tanks will be disposed of in accordance with the State and local guidelines for underground tank disposal.

Based on the Facility Requirements analysis conducted for this study, future fuel storage needs by the end of the 20 year planning period would likely total roughly 80,000 gallons per month. Fuel tanks and other material storage areas will be designed for compliance with applicable laws and regulations.

DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F) LANDS

Paragraph 47e, FAA Order 5050.4A provides the following.

(7)(a) Section 4(f) provides that the Secretary shall not approve any program or project which requires the use of any publicly-owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state or local significance, or any land from an historic site of national, state or local significance as determined by the officials having jurisdiction thereof unless there is no feasible and prudent alternative to the use of such land and such program includes all possible planning to minimize harm.

(7)(b) ...When there is no physical taking but there is the possibility of use of or adverse impacts to section 4(f) land, the

FAA must determine if the activity associated with the proposal conflicts with or is compatible with the normal activity associated with this land. The proposed action is compatible if it would not affect the normal activity or aesthetic value of a public park, recreation area, refuge, or historic site. When so construed, the action would not constitute use and would not, therefore, invoke Section 4(f) of the DOT Act.

There are no Section 4(f) facilities located at or adjacent to the site proposed for the development of the Flagstaff Pulliam Airport. At this time, all of land identified for acquisition for the proposed extension to Runway 21 is under the jurisdiction of the USFS (Coconino National Forest). A member of the Coconino National Forest has served on the Planning Advisory Committee for the master plan update and has indicated that the acquisition of USFS land for the runway extension and RPZ does not contain any Section 4(f) land.

HISTORIC, ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

The Arizona State Historic Preservation Officer (SHPO) was contacted regarding the potential presence of cultural resources within the area of the proposed development. Their written response states that, *"If there has been no archaeological survey of the project areas, it is my recommendation that the areas be surveyed by a qualified archaeologist to locate and evaluate any existing cultural remains. Once the survey is completed, a copy of the report should be sent to the SHPO office for review and comment"*. A copy of this correspondence is included in **Appendix A**.

An archaeological examination of approximately 247.5 acres of property planned for acquisition (as part of an earlier recommendation for land acquisition to

support runway extension), which more or less contains the entire land to be acquired under the current project, was conducted in 1975. This survey ⁽¹⁾ uncovered only one lithic scatter quarry site within the survey area (NA14,166 - Arizona I:14:106 MNA) although ground cover may have obscured other sites. A copy of this report is included in **Appendix A**.

Should archaeological resources be encountered during preconstruction or construction activities, work should cease in the area of the discovery and the SHPO be notified immediately, pursuant to 36 CFR 800.11. A statement to this effect should be included in any contractual agreement for airport construction.

BIOTIC COMMUNITIES

As part of this environmental evaluation, the U.S. Department of the Interior, Fish and Wildlife Service (USFWS) and the Arizona Game and Fish Department (AG&F) were contacted to request information regarding potential impacts to wildlife, plants and native habitat as a result of the proposed project. Both agencies were asked whether there were any known threatened or endangered species other species of special significance know to exist in the area of the project. Information specifically related to threatened and endangered species is discussed in the following section, Endangered and Threatened Species of Flora and Fauna. Correspondence from these agencies is included in **Appendix A**.

The proposed site area is approximately 7,000 feet in elevation with gentle slopes prevalent in the proposed general aviation development area (Westplex) and rather steep drops to the west of the proposed runway extension. The Westplex area consists of scattered stands of mature Ponderosa Pine while scatterings of these pines and other vegetation characterize the runway extension area. There are obvious signs of man's impact in both areas,

more emphatically within the Runway 21 protection zone.

The USFWS recognizes the potential existence of the federally listed endangered American Peregrine Falcon (Falco peregrinus anatum) in the area and recommends a survey for sign or presence of the aforementioned species prior to any construction. In an earlier environmental assessment of approximately 65 acres of land adjacent to the airport, the Peregrine was not indicated on a list of birds expected to occur in the area (Environmental Assessment For A Segment of the Proposed 4th Street Arterial, SWCA, Inc., Sept 1988).

THREATENED AND ENDANGERED SPECIES OF FLORA AND FAUNA

The written response from the USFWS states, "*The Service recognizes the potential existence of a candidate species, Arizona leather flower (Clematis hirsutissima var. arizonica)*". The USFWS lists as candidate species those flora where "...sufficient information on vulnerability or threats to support proposing to list them as threatened or endangered". The USFWS recommends that a survey be conducted to look for signs of or the presence of this species, with a copy of the report forwarded to the USFWS, Phoenix office, for their review. Coconino National Forest will also be contacted, input solicited and appropriate documents prepared. This survey will be conducted during particular periods when the leather flower can be detected. A copy of the correspondence is contained in **Appendix A**.

COASTAL MANAGEMENT PROGRAM AND COASTAL BARRIERS

The Flagstaff Pulliam Airport is not located within the jurisdiction of any State Coastal Management Program. The Coastal Zone Barrier resources system consists of undeveloped coastal barriers along the Atlantic and Gulf Coasts. These resources

are well outside the sphere of influence of Flagstaff and its vicinity, and do not apply to the proposed action.

WILD AND SCENIC RIVERS

According to the River Mileage Classifications for Components of the National Wild and Scenic Rivers System, there are no rivers within Coconino County that are protected by the Wild and Scenic Rivers Act (PL-90-542) as amended.

WETLANDS

No wetlands would be impacted by the development of Flagstaff Pulliam Airport. The USFWS has confirmed this status in correspondence contained in **Appendix A**.

FLOODPLAIN

Federal Emergency Management Act (FEMA) maps were examined to identify designated 100 year floodplain areas within the proposed project or immediate vicinity. In addition, representatives of the U.S. Corps of Engineers were contacted to determine any floodplain or drainage concerns related to the proposed project.

Surface water in the airport area is drained by tributaries of Fay Canyon, Walnut Creek and Pumphouse Wash. Fay Canyon is a tributary of the Rio de Flag which passes through eastern Flagstaff and is itself a tributary of the Little Colorado River. Walnut Creek is also a tributary of the Little Colorado River, passing through steep canyons in the vicinity. Pumphouse Wash drains the western portions of the airport and is a tributary to Oak Creek, which passes through the Oak Creek Canyon scenic area. None of the ephemeral streams that drain the airport are used for domestic or municipal water supply in the Flagstaff area. There is not sufficient impoundage at or near the airport to

impound a 100 year flood. The peak discharge of this event could be mitigated by a combination of control measures (such as grassed waterways, grade stabilization, etc.) and improved channel and drainage works.⁽²⁾

FARMLAND

Construction of the proposed runway extension would not impact any areas currently used for the grazing of livestock. No cultivated farmland exists within the site or adjacent areas.

Since prime and unique farmland in the State of Arizona includes, by definition, only land that is currently being irrigated, no land of this designation would be impacted by the proposed action.

ENERGY SUPPLY AND NATURAL RESOURCES

There are no existing energy production or supply facilities that would be affected by the proposed project and no impacts are anticipated on the development of energy resources.

A slight increase in energy demand will likely occur as a result of the proposed projects. Additional electricity will be needed for taxiway/taxilane and parking area lighting, the high intensity runway lighting, and additional buildings/hangars. This increase in electrical demand is not expected to be significant and will be partially offset by the reduction of lighting requirements which will occur as hangars/buildings are removed from other areas.

In addition to this electric demand, expenditures of manpower, fuel, electricity, chemicals, water and other forms of energy will be necessary to construct the

improvements and to provide for maintenance and operation of the facilities.

The use of nonrenewable resources is considered to be an irreversible impact, since these resources are only renewable over long periods of time. Commitments of these resources must be made in order to allow for continued maintenance and operation of the facilities proposed in the Master Plan.

Traffic to the airport is likely to increase, however, provisions have been made within the master plan to construct additional access roads to facilities and to repair and improve Shamrell Boulevard. Increases in automobile traffic are not expected to be significant.

LIGHT EMISSIONS

The proposed lighting improvements for the short and midterm development include High Intensity Runway Lighting, REIL's for Runway 3 and Medium Intensity Taxiway Lighting for the West Taxiway. It is also anticipated that light poles would eventually be installed within the automobile parking areas and to provide security to commercial terminal apron areas.

Due to the limited nature of light generating equipment proposed and the distance from existing residential structures, the proposed improvements are not expected to result in a significant increase in light emission impacts. The airport is surrounded by forest which provides a natural barrier to light emissions from airport facilities. If problems do materialize, they can be handled on a case-by-case basis by shielding or adjusting the angle of the lighting.

To reduce potential impacts associated with project lighting, the use of low pressure sodium lights is recommended for all public automobile parking areas and driveways.

SOLID WASTE

The increase in the generation of solid waste anticipated as a result of the proposed action will be slight. The City of Flagstaff will be responsible for collection and proper disposal.

CONSTRUCTION IMPACTS

Construction activities have the potential to create temporary environmental impacts. These impacts will primarily relate to noise resulting from heavy construction equipment, fugitive dust emissions resulting from construction activities, and potential impacts on water quality from runoff and soil erosion from exposed surfaces.

A temporary increase in particulate emissions and fugitive dust may result from construction activities. The use of temporary dirt access roads would increase the generation of particulates. Dust control measures, such as the watering of exposed soil areas (see section on Air Quality), will be implemented to minimize this localized impact. Any necessary clearing and grubbing of construction areas will be conducted in sections or sequenced to minimize the amount of exposed soil at any one time. All vehicular traffic will be restricted to the construction site and established roadways.

Temporary dikes, basins and ditches will be utilized with each phase of construction to control erosion and sedimentation, and prevent degradation of off-airport surface water quality. After construction is complete, slopes and denuded areas will be reseeded to aid in the vegetation process. Provisions of Advisory Circular 150/5370/10A **Standards for Specifying Construction of Airport, Temporary Air and Water Pollution, Soil Erosion, and Siltation Control** will be incorporated into all project specifications.

Effects of construction are generally short term and localized. With the implementation

of mitigation measures, impacts related to construction of the proposed project are not expected to be significant.

PUBLIC AND AGENCY INPUT

An analysis was made of the proposed project's consistency with objectives of federal, regional, state and local land use plans, policies and controls for the area concerned. To this end, various environmental and planning agencies were contacted in writing and by telephone to solicit general and site specific comments regarding the proposed development at Flagstaff Pulliam Airport. All written responses received from these agencies, as well as interested citizens, are included in **Appendix A**.

Since the project is currently within the jurisdiction of Coconino County and the Coconino National Forest, both agencies were members of the planning advisory committee established for the airport master plan update. No specific concerns were expressed from either staff regarding the proposed development.

In addition to agency coordination activities, the public was given the opportunity to provide input throughout the process. All meetings held with the Airport Planning Advisory Committee (PAC), as well as all presentations to the Flagstaff City Council, were open to the public. Two of these meetings were advertized as public workshops and scheduled at the conclusion of important phases during the master plan process. Written correspondence received from individuals with regard to the site selection or master plan process is included in **Appendix A**.

The development of the proposed Flagstaff Pulliam Airport is consistent with the objectives of both the Federal Aviation Administration's National Plan of Integrated

Airport Systems, and the Arizona State Aviation System Plan.

CONCLUSION

Based on the review of potential environmental impacts and considerations anticipated as a result of the construction and development of Flagstaff Pulliam Airport, the major issues identified are summarized below. Mitigation measures may be recommended to limit the potential impacts related to a number of these resources. Please note that as more specific information is gathered through the upcoming Environmental Assessment process, additional issues may arise.

- Air Quality - limiting of fugitive dust during construction, and stabilization techniques for non-paved access road to site.
- Water Quality - erosion control and storage and handling of fuel and other petroleum products.
- Floodplain/Storm water Control - protect airport facilities from storm runoff damage and protection of downstream areas from increases in storm water runoff or degradation of water quality.
- Cultural Resources - survey required.
- Endangered and Threatened Species - survey for one species of flora requested by the USFWS.

(1) Summary Report for Flagstaff-Pulliam Airport EIS, November 1975, Prepared by Gerald Meeks Etchieson and submitted by Alexander J. Lindsay Jr., Museum of Northern Arizona. (See Appendix A)

(2) Hydrology for Flood Plain Information Studies, Rio de Flag and Sinclair Wash, Vicinity of Flagstaff, Corps of Engineers, Department of the Army, October 1974.